

**ABSTRACT**

An electrostatic chuck is capable of attachment to a pedestal in a process chamber. The chuck has an electrostatic puck comprises a ceramic body with an embedded electrode. The ceramic body has a substrate support surface with an annular periphery. The chuck also has a base plate below the electrostatic puck that is a composite of a ceramic material and a metal. The base plate has an annular flange extending beyond the periphery of the ceramic body. The base plate and electrostatic puck can be supported by a support pedestal having a housing and an annular ledge that extends outwardly from the housing to attach to the annular flange of the base plate. A heat transfer plate having an embedded heat transfer fluid channel can also be provided.